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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,331	04/04/2001	Jukka Suonvieri	4925-104PUS	8413

7590 11/14/2007
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EXAMINER

CHO, UN C

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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11/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/786,331	SUONVIERI, JUKKA	
	Examiner	Art Unit	
	Un C. Cho	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 22, 25, 26, 28 – 33, 35, 37, 39 – 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 5,839,071) in view of Chater-Lea (US 5,822,314) and further in view of Komara et al. (US 6,253,060 B1).

Regarding claim 21, Johnson discloses monitoring time delays associated with communications between base station and mobile stations and calculating a timing advance which corresponds to time delays associated with communications between the base station and the mobile stations (Johnson: Col. 9, line 51 through Col. 10, line 19 wherein timing advance value is calculated based on time delays).

However, Johnson as applied above does not specifically disclose determining whether a communication was relayed via at least one of the network elements by detecting an increased time delay as compared to a known time delay of mobile stations communicating directly with the base stations; wherein a determination is made that the communication is relayed via at least one of the network elements if the timing advance has a value which is greater than a predetermined value and sending an event notice to a network

management system, when a presence of at least one of the network elements is initially detected. In an analogous art, Chater-Lea remedies the deficiencies of Johnson by disclosing determining whether a communication was relayed via at least one of the network elements by detecting an increased time delay as compared to a known time delay of mobile stations communicating directly with the base stations; wherein a determination is made that the communication is relayed via at least one of the network elements if the timing advance has a value which is greater than a predetermined value (Chater-Lea: Col. 2, lines 3 – 26; Col. 2, lines 52 – 62; Col. 3, lines 6 – 9; Col. 5, lines 13 – 35 and Col. 6, line 36 through Col. 7, line 16 wherein Chater-Lea discloses that first and second communication units communicate with each other but instead of communicating directly it has a relay in between the two communication units that delays the communication, thus it is necessary to calculate the delay and adjust its timing accordingly in order to be in sync with each other and the reason that Chater-Lea is calculating the timing offset is because of the presence of the relay device that has been recognized and determined that it is causing the delay, thus it would have been obvious to one of ordinary skill in the art to know that when a delay is detected in a communication it is because there is a relay or something else that is delaying the communication between the two). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Chater-Lea to the system of Johnson in order to provide an effective method for obtaining timing synchronization between two

communications units, in a communications system employing relay devices to extend the coverage range, when timing information is included in the transmissions which would also be beneficial to have a communications system, employing a communications protocol, that accommodates for such a method for obtaining timing synchronization (Chater-Lea: Col. 1, lines 56 – 63).

However, Johnson in view of Chater-Lea as applied above does not specifically disclose sending an event notice to a network management system, when a presence of at least one of the network element is initially detected. In an analogous art, Komara remedies the deficiencies of Johnson in view of Chater-Lea by disclosing such limitation wherein the base station notifies the OMC of an error condition (Komara: see Abstract and Col. 4, lines 29 – 44 wherein a BTS sends notification information to OMC upon detecting lack of activity or error condition, which would have been obvious to one of ordinary skill in the art to know that when there is a lack of activity it could mean that it has been a long time since it has communicated with the BTS such as delay or any other type of conditions that the BTS was instructed to notify). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Komara to the modified system of Johnson in view of Chater-Lea in order to provide an efficient notification method where the BTS notifies OMC of any suspicious condition within the network.

Regarding claim 22, Chater-Lea in as applied above discloses identifying the communication relaying elements based on the communication time delays (Chater-Lea: Col. 2, lines 15 – 20).

Regarding claim 25, Chater-Lea as applied above discloses wherein the predetermined value is zero (BS checks the received frame number, if the expected frame number equals the received frame number then there is no difference or the difference is zero; Chater-Lea: Col. 7, lines 2 – 4).

Regarding claim 26, Chater-Lea as applied above discloses wherein the mobile communication network is a GSM network (Chater-Lea: Col. 1, lines 30 – 34).

Regarding claim 28, Johnson as applied above discloses wherein the time delays are monitored by a base transceiver station (Johnson: Col. 9, line 51 through Col. 10, line 19).

Regarding claim 29, Johnson as applied above discloses wherein the time delays are monitored by a base station controller (base station is inherently connected to a base station controller or it is built-in within the base station and Johnson: Col. 9, line 51 through Col. 10, line 19).

Regarding claim 30, Komara as applied above discloses monitoring the communication relayed via at least one of the network elements to determine various parameters which provide information with respect to network functionality and the network elements (Komara: see Abstract and Col. 4, lines 29 – 44).

Regarding claim 31, Chater-Lea as applied above discloses wherein at least one of said network elements is a radio repeater (Chater-Lea: Col. 3, lines 33 – 43).

Regarding claims 33, 38, 42 and 43, the claims are interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 26.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 30.

Regarding claim 39, the claim is interpreted and rejected for the same reason as set forth in claim 28.

Regarding claim 40, the claim is interpreted and rejected for the same reason as set forth in claim 29.

Regarding claim 41, Chater-Lea as applied above discloses wherein the steps of determining whether a communication was relayed via at least one of the network element is performed without requiring any additional monitoring equipment to be located in the network element performing the relaying and without requiring any additional signaling to be generated by the network element performing the relaying (Col. 2, lines 3 – 26; Col. 2, lines 52 – 62; Col. 3, lines 6 – 9; Col. 5, lines 13 – 35 and Col. 6, line 36 through Col. 7, line 16).

3. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Chater-Lea and in view of Komara as applied to claim 21 above and further in view of Bassirat (US 6,507,741 B1).

Regarding claim 32, Johnson in view of Chater-Lea and in view of Komara as applied above does not specifically disclose wherein at least one of said network element is an optical tunneling configuration. In an analogous art, Bassirat remedies the deficiency of Johnson in view of Chater-Lea and in view of Komara by disclosing such limitation in Col. 7, lines 51 – 56. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Bassirat to the modified system of Johnson in view of Chater-Lea and in view of Komara in order to provide an efficient and useful system and method that improves hand-off performance from cell to cell or from cell to another cell that uses different technology.

Response to Arguments

4. Applicant's arguments with respect to claims 21, 22, 25, 26, 28 – 33, 35, 37, 39 – 43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

Application/Control Number:
09/786,331
Art Unit: 2617


Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Un C Cho
Examiner
Art Unit 2617

11/12/07 *UC*


GEORGE ENG
SUPERVISORY PATENT EXAMINER